Dover Municipal Landfill Superfund Site
Second Consent Decree for RD/RA

Civil Action No. 1:92-cv-406-M

APPENDIX B-1

1993 SOW

CONSENT DECREE EPA DOCKET NO. CERCLA I-23

APPENDIX B

STATEMENT OF WORK

DOVER MUNICIPAL LANDFILL SUPERFUND SITE

APPENDIX B
TO
CONSENT DECREE
U.S. V. City of Dover et al
STATEMENT OF WORK

DOVER MUNICIPAL LANDFILL SUPERFUND SITE RD/RA STATEMENT OF WORK

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STATEMENT OF WORK FOR REMEDIAL DESIGN AND REMEDIAL ACTION
DOVER MUNICIPAL LANDFILL

A. PURPOSE OF THE SOW

This Remedial Design/Remedial Action Statement of Work (SOW) further defines the response activities and deliverable obligations that the Work Settling Defendants shall perform under the terms of the Consent Decree, EPA Docket No. CERCLA I-23 (the Consent Decree) in order to perform the Work as specified in the Consent Decree. The intent of this SOW is to provide an enforceable plan to carry out all aspects of the United States Environmental Protection Agency (EPA) Record of Decision (ROD) signed by the Regional Administrator, Region I, on September 10, 1991, for the Dover Municipal Landfill Site, with one exception: neither the SOW nor the Consent Decree provide for the remediation of the contaminated groundwater currently in the Eastern or Southern Plumes as those terms are defined in the Consent Decree. To the extent that this document refers to and relies on the ROD, it refers to all portions of that document and its attachments with the exception of the remediation of the Eastern and Southern Plumes.

Sections C, D and E of this Appendix give an overview and general description of the Work required for consolidation of sediments in the drainage swale (Section C), the recontouring and capping of the Landfill (Section D) and treating the contaminated leachate/groundwater (Section E). Sections G, H, and I of this Appendix set forth in greater detail the requirements and procedures that the Work Settling Defendants shall follow during the Remedial Design (Section G), Remedial Action (Section H) and Operation and Maintenance (Section I) phases of the work. Section K of this Appendix sets forth the schedule of deliverables.

B. DEFINITIONS

The definitions provided in the Consent Decree are incorporated herein by reference. In addition, the following definitions shall apply:

1. Aquifer - A geological formation, or group of formations, capable of producing usable amounts of groundwater to wells and springs.

2. Point of Compliance - The point at and beyond which groundwater shall meet Cleanup Levels as specified in the ROD; specifically, the Point of Compliance will be set at the current areal extent of the Waste Management Area. The Waste Management Area, as defined below, will include those locations where Waste has been disposed or moved during the operation of the Landfill, and the drainage ditch surrounding the Landfill. The exact location of the Point of Compliance shall be determined by EPA in connection with the site survey to be conducted by the Work Settling Defendants in pursuant to Section G.1.d. of this SOW. The Point of Compliance shall be set in accordance with applicable or relevant and appropriate requirements as set out in the ROD; specifically, it shall be set in accordance with 40 C.F.R § 264.95 and the National Contingency Plan, 40 C.F.R. Part 300.

3. Hot Spots - Highly toxic and/or highly mobile material that present a potential threat to human health or the environment.

4. Hydraulic barrier - A dynamic artificial groundwater divide created through the use of extraction and/or injection systems in order to prohibit groundwater movement from contaminated areas to less contaminated or uncontaminated areas.

5. Margin - That portion of the Waste Management Area from which Waste will be removed during recontouring.

6. Overburden - The unconsolidated rock and soil material overlying bedrock.

7. Sludge - a semi-solid residue produced during the metals removal process of a groundwater treatment system.

8. Upper Aquifer - The hydrogeologic formation existing at and continuing beyond the Site above the marine clay formation.

9. Waste - shall include Waste Material as defined in the Consent Decree and solid waste as defined at 42 U.S.C. §6903.

10. Waste Management Area - The area where Waste has been disposed or moved during the operation of the Landfill and the drainage ditch surrounding the Landfill.

C. OVERVIEW OF REMEDY FOR CONSOLIDATION OF SEDIMENTS IN THE DRAINAGE SWALE

During remedial activities at this Site, the Work Settling Defendants shall excavate contaminated sediments in the drainage swale, adjacent to the eastern corner of the Landfill and down to the Cocheco River, and consolidate those sediments on the Landfill before constructing the composite cap on the Landfill.

These activities will also include the restoration of the natural and beneficial values of the wetlands and floodplains adversely affected by the removal of these contaminated sediments.

1. Cleanup Levels for Soils and Sediments

The Work Settling Defendants shall perform the Work such that at the conclusion of the excavation and restoration of the drainage swale, the concentrations of arsenic in the sediments shall be at or below the Cleanup Level listed below.

Indicator Compound	Cleanup Level (mg/kg)
Arsenic	50

2. Standards for Removal of Sediments in the Drainage Swale

In designing, constructing, operating, maintaining, and monitoring the remedial technology for removal of sediments in the drainage swale, the Work Settling Defendants shall comply with all applicable or relevant and appropriate requirements as identified in Appendix E to the ROD and all terms of the Consent Decree and this SOW.

The Settling Defendents shall provide for predesign sediment sampling to identify areas of sediment deposition exhibiting contaminant concentrations in excess of the Cleanup Level. The Work Settling Defendants shall excavate all contaminated sediments with arsenic concentrations above the Cleanup Level, as defined in Section C.1, from the drainage swale adjacent to the eastern side of the Landfill down to the Cocheco River as well as those contaminated sediments which have accumulated at the convergence of the swale and the river, as denoted as area 3 in Attachment 3 to this SOW. Work Settling Defendants shall consolidate these excavated sediments on the Landfill under the composite cap.

In conducting the excavation and consolidation of the sediments, the Work Settling Defendants shall take every measure practicable to avoid adverse impact on and disturbance to wetland and floodplain areas and the Cocheco River; Work Settling Defendants shall also minimize adverse impact to the flora and fauna in these areas to the maximum extent practicable. In performing the excavation, Work Settling Defendants shall use appropriate engineering controls such as coffer dams, silt barriers, and/or bales of hay, to isolate the sediments in the drainage swale and to minimize suspension and downstream transport of these sediments.

The Work Settling Defendants shall test the soils/sediments remaining after excavation by analyzing representative samples of those soils/sediments according to EPA CLP Methods to confirm that the remaining soils/sediments do not exceed the Cleanup Levels, as defined in Section C.1, for soils and sediments.

Following the completion of the sediment excavation, the Work Settling Defendants shall restore the natural and beneficial values of the wetlands and floodplains where sediments were removed and other wetlands or floodplains adversely affected by the remedial work to a condition similar to that of the immediately adjacent undisturbed wetlands or floodplains.

The Work Settling Defendants shall also continue to evaluate the effectiveness of the sediment cleanup and the wetlands/floodplain restoration and maintenance of the wetlands/floodplain, for five years or until the wetland/floodplain restoration is approved by the EPA as complete, which ever comes first.

The Work Settling Defendants shall conduct all activities involving the wetlands and floodplains in a manner consistent with Executive Orders 11990 and 11988, and 40 CFR Part 6, Appendix A. The Work Settling Defendants shall conduct all activities in the wetlands and floodplains in a manner utilizing the practicable alternative that will have the least adverse impact on the aquatic ecosystem and the environment, consistent with and pursuant to all applicable or relevant and appropriate requirements as identified in Appendix E of the ROD.

D. OVERVIEW OF REMEDY FOR CAPPING THE LANDFILL

During remedial activities, the Work Settling Defendants shall place a composite cap system over the Waste Management Area except in those areas where Waste has been removed as part of recontouring and EPA determines that a less stringent cap design is acceptable for those areas. The Waste Management Area is delineated on Attachment 2 of this Appendix to the Consent Decree.

1. Standards for Capping the Landfill

The Work Settling Defendants shall design, construct, operate and maintain the composite cap on the Waste Management Area except in those areas where Waste has been removed as part of recontouring and EPA determines that a less stringent cap design is acceptable for those areas. In so doing, the Work Settling Defendants shall comply with all applicable or relevant and appropriate requirements as identified in Appendix E to the ROD and all terms of the Consent Decree and this SOW.

The Work Settling Defendants shall design and construct the cap system to provide long-term minimization of the migration of liquids through the Landfill and to reduce to Final Cleanup Levels the migration of contaminants beyond the Point of Compliance. The cap must provide long-term performance with minimum maintenance; as such, the Work Settling Defendants shall design the final cover to promote drainage, minimize erosion, minimize accumulation of gas pressures, and accommodate settling. The Work Settling Defendants shall design, construct and maintain the cap in accordance with 40 CFR Part 264 Subparts G and N and the New Hampshire Admin. Code ENV-WM 708.02(k) and 708.03(d)(6).

The final two-component, low permeability layer cap design (composite cap) shall at a minimum meet the performance standards and material specifications set out in the EPA RCRA Technical Guidance Document "Final Covers of Hazardous Waste Landfills and Surface Impoundments" (EPA/530-SW-89-047), dated July 1989 and comply with 40 CFR Part 264, Subparts G and N regulations and the NH Administrative Code ENV-WM 708.02(k) and 708.03(d)(6). The Work Settling Defendants shall design and install a composite cap which includes the following elements, from top to bottom:

a. a soil layer, comprised of a vegetative top soil, to minimize erosion and a soil component;

b. a minimum one-foot-thick granular drainage layer, or equivalent material composition with a permeability greater than or equal to 1×10^{-2} cm/sec;

c. a flexible membrane liner (FML) at least 40 mils thick, lying wholly below the maximum depth to frost penetration (EPA shall not require the FML to lie at a depth greater than 36 inches below grade if a geosynthetic clay liner, such as bentonitic blankets, is used as a substitute for the two feet of 1×10^{-7} cm/sec low permeability soil);

d. a minimum two-foot-thick underlying clay barrier of low-permeability soil, or an equivalent material composition, such as a geosynthetic clay liner, with a maximum in-place saturated hydraulic conductivity of less than or equal to 1×10^{-7} cm/sec; and

e. a gas vent layer consisting of a minimum 1-foot-thick coarse-grained, porous material, or an equivalent material composition such as a drainage geocomposite, that allow gases emanating from the Wastes buried in the Landfill to be collected.

Work Settling Defendants shall design and construct the composite cap using filter layers between layers comprised of soils of greatly different particle sizes, to prevent one from migrating into the other, unless such filter layers are unnecessary as determined by EPA. The filters may be constructed of graded soil materials or geosynthetic materials.

Prior to placing the composite cap, the Work Settling Defendants may, to the extent practicable, recontour the Landfill using material from the toe of the Landfill, the side slopes of the Landfill, the perimeter drainage ditch and the soils adjacent to the drainage ditch (see attachment 3). Recontouring may reduce the amount of imported clean fill required to obtain adequate slopes to allow for proper surface water drainage from the Waste Management Area and to facilitate the construction of the cap. The composite cap must extend over those areas excavated for purposes of recontouring unless Work Settling Defendants can demonstrate that levels of contaminants in soils in those areas will not result in contaminant levels in groundwater above the groundwater Interim and Final Cleanup Levels at the Point of Compliance and that those soil levels are otherwise protective of human health and the environment as described in the paragraph that follows.

The Work Settling Defendants shall submit as part of the Pre-Design Work Plan, the sampling and analysis program for soils in the areas to be recontoured and the model(s) to be used to evaluate contaminant fate and transport. The Work Settling Defendants shall also submit to EPA a proposal for establishing cleanup levels in the soils in accordance with EPA guidance. EPA may conduct a risk assessment on the remaining soil contaminants in accordance with EPA Guidance, and may include, but not be limited to, a contact and ingestion risk analysis. The risk assessment shall employ methods and assumptions consistent with Interim and Final EPA guidance, policies and regulations available at the time the risk assessment is conducted. The Work Settling Defendants shall propose for EPA approval a cap design and performance standards for capping the Margin. Upon approval by EPA, those soil cleanup levels and cap performance standards shall become enforceable Performance Standards for purposes of this SOW and Decree. In no case shall the Work Settling Defendants' proposal to employ a cap other than the composite cap in the Margin delay design and implementation of the composite cap.

During recontouring, Waste Material at the perimeter of the Landfill may be uncovered, and hot spots may be encountered. Work Settling Defendants shall minimize the possibility of encountering hot spots by conducting a preliminary assessment of materials beneath the surface of the Landfill in areas to be recontoured. To the maximum extent practicable, Work Settling Defendants shall limit excavation to areas containing predominantly soils, debris, and municipal waste. If hot spots are exposed, Work Settling Defendants shall test the material and, if the material is determined to be a hazardous waste as defined by the Resources Conservation and Recovery Act (RCRA) or a waste exhibiting the characteristics of a RCRA hazardous waste, Work Settling Defendants shall remove, treat, and dispose of it off-site in accordance with RCRA and state hazardous waste laws.

If at any time prior to or during recontouring activities, EPA determines that recontouring activities in a given area of the Site are posing a threat to human health and the environment or shall pose such a threat as described in the Site Specific Health and Safety Plan required under Section G.1.b of this SOW, then such activities in that area shall be immediately suspended and immediate measures taken to stop or prevent that threat. Recontouring activities in that area shall only continue after the Work Settling Defendants have proposed, and EPA has approved, corrective actions that allow those activities to occur in a manner that protects human health and the environment and meet ARARs. Alternatively, the Work Settling Defendants can terminate recontouring in that area and if that area is not a hot spot, Settling Defendant's may place clean fill to provide the necessary subgrade for the landfill cover.

During recontouring Work Settling Defendants shall employ appropriate engineering methods to control odor and hazardous emissions; such methods may include the use of vapor suppression foam. Work Settling Defendants shall conduct continuous ambient air monitoring throughout recontouring in order to ensure that State air quality standards are not exceeded. Work Settling Defendants shall cease recontouring activities resulting in exceedance of air quality standards or limits at the monitoring stations established in the Field Sampling and Analysis Plan; recontouring shall not recommence until Work Settling Defendants provide, and EPA approves, a corrective action plan.

In addition, prior to placing the cap over the Landfill, the Work Settling Defendants shall excavate and deposit onto the Landfill sediments from the drainage swale, as described in Section C of this SOW.

The Work Settling Defendants shall proofroll, grade and prepare Site soils, with minimal disturbance of buried Wastes, to form a proper subgrade for the cap. The Work Settling Defendants shall ensure that the final slope is free from significant surface irregularities and shall design the slope to provide proper drainage and minimize erosion. If needed for construction of the composite cap, the Work Settling Defendants shall use soil materials from off-site locations. The Work Settling Defendants shall control runoff and sedimentation during construction activities by using silt fences, sedimentation ponds, or other means, in order not to disturb or negatively impact the wetlands or other areas adjacent to the Landfill.

As part of the capping procedure, the Work Settling Defendants shall also collect and vent Landfill gases, such as methane, that are generated below the cap. The Work Settling Defendants shall perform pre-design investigations to determine whether passive gas collection and venting is sufficient to protect human health and the environment and to prevent potentially significant

adverse impacts to any component of the source control remedy from gas generation. The Work Settling Defendants shall propose in the Pre-Design Report, for EPA acceptance, whether passive gas collection and venting meets the above requirements. If venting to the atmosphere is determined to be acceptable by EPA, then the Work Settling Defendants shall vent methane and other gases by means of a passive interior gas collection/recovery system, allowing the gases to vent to the atmosphere. In designing, constructing and operating any gas venting system, the Work Settling Defendants shall comply with ARARs and take measures necessary to protect human health and the environment including measures to reduce odors and VOC emissions.

The Setting Defendants shall coordinate the construction of the Landfill cap with the construction of the gas ventilation, groundwater diversion system and groundwater/leachate collection/extraction and treatment systems, in order to accommodate construction below, and adjacent to, the composite cap. The Work Settling Defendants shall install the Landfill gas collection system and the groundwater/leachate collection/extraction and treatment systems before or during the cap construction phase. The Work Settling Defendants shall seal perforations made to the FML and other layers of the cap, to maintain the integrity and the required performance of the multi-layer, composite cap.

E. OVERVIEW OF REMEDY FOR TREATING CONTAMINATED GROUNDWATER

Also during the remedial activities, the Work Settling Defendants shall construct a groundwater/leachate collection/extraction and treatment system which will minimize and control further contamination of groundwater by the Wastes left in place such that groundwater contaminant concentrations at the Point of Compliance meet Final Cleanup Levels. This shall be accomplished through the diversion of clean upgradient groundwater away from the Waste Management Area and the capture and treatment of contaminated groundwater from the upper aquifer migrating beyond the Point of Compliance above Final Cleanup Levels. The collected groundwater/leachate shall be treated by the Work Settling Defendants as set forth in Section E.2. of this SOW, prior to discharge to the Cocheco River or to the City of Dover Publicly Owned Treatment Works (POTW). The Work Settling Defendants shall continue to operate and maintain the groundwater/leachate treatment system such that Final Cleanup Levels are achieved at the Point of Compliance and the quality of groundwater migrating beyond the Point of Compliance meets Performance Standards.

The Work Settling Defendants shall conduct long-term groundwater monitoring in the Southern Plume in accordance with Section G.2.a.(3) of this SOW. The Work Settling Defendants shall install a groundwater monitoring system as set forth in Section G.2.a.(3) of this SOW to monitor the Eastern Plume. A report shall be submitted every three (3) years to EPA, beginning three years after achieving 75% construction completion, which compares the behavior of the Eastern Plume to conditions at the time of the ROD and over time. The Work Settling Defendants shall sample groundwater and submit sampling results to EPA and the State on a semi-annual or quarterly basis as set out in Section G.2.a.(3) of this SOW. The Work Settling Defendants shall submit a report to EPA and the State, evaluating the attenuation of the Eastern Plume, beginning three years from achieving 75 percent construction completion of the cap and groundwater collection/extraction and treatment systems. The Work Settling Defendants shall submit a report every three years for the first 9 years and then every 5 years thereafter or until Cleanup Levels, established in the ROD, have been met throughout the Eastern Plume. The report shall include an evaluation of the "natural attenuation" of the plume including estimates of the time to reach Cleanup Levels established in the September 10, 1991 ROD.

The remedial activities called for in the ROD for the treatment of contaminated groundwater in the Southern Plume and any active remediation for the treatment of contaminated groundwater in the Eastern plume are not addressed in this SOW or in the Consent Decree. By excluding remedial activities for the Eastern and Southern Plumes from these documents, the EPA in no way implies that those remedial activities will not be undertaken in the future or that cleanup levels must not be met in these plumes in the future.

1. Interim Groundwater Cleanup Levels

Interim Cleanup Levels for groundwater contamination are specified below and in the ROD. While these cleanup levels are consistent with applicable or relevant and appropriate requirements (ARARs), a cumulative risk that could be posed by these compounds and others emanating from the Landfill may exceed the risk limits as set out in the National Contingency Plan. Consequently, these levels are considered to be Interim Cleanup Levels for groundwater. As set out in Section E.3 of this SOW, after Settling Defendant's attain Interim Cleanup Levels, EPA will perform a risk assessment on residual groundwater contamination at the Point of Compliance. Final Cleanup Levels will then be set by EPA and Work Settling Defendants shall attain those Final Cleanup Levels.

The Work Settling Defendants shall conduct remedial activities such that the following Interim Cleanup Levels are achieved at the Point of Compliance.

Contaminant	Cleanup Level (ug/L)
Carcinogens	
Arsenic	50*
Benzene	5
1,1-Dichloroethylene	7
1,2-Dichloroethane	5
Methylene Chloride	5
Tetrachloroethylene	5
Trichloroethylene	5
Vinyl Chloride	2
Non-Carcinogens	
Arsenic	50*
Chloroethane	14,000
Tetrahydrofuran	700
Acetone	700
Methyl Ethyl Ketone (MEK)	200
Methyl Isobutyl Ketone (MIBK)	350
Toluene	1,000

* Due to the presence of naturally occurring arsenic at and around the Site, the cleanup level will be 50 ug/l (MCL) or background, whichever is higher. Background levels will be determined by EPA based upon the results of groundwater analyses performed during pre-design and design activities.

2. Technology for Restoring Groundwater

The Work Settling Defendants shall design, construct, operate and maintain the groundwater/leachate collection/extraction and treatment system to achieve the Cleanup Levels in accordance with the following:

a. The Work Settling Defendants shall design the groundwater/leachate collection/extraction and treatment system to attain Cleanup Levels in the groundwater at the Point of Compliance and to prevent all future migration of contaminants away from the Waste Management Area above Interim Cleanup Levels. The Work Settling Defendants shall utilize an extraction system, such as wells, trenches or a combination of the two, to extract groundwater and leachate from the upper aquifer beneath the Waste Management Area. The Work Settling Defendants shall propose an extraction system design based on data analyzed to determine the vertical extent of contamination at the perimeter of the Waste Management Area and other aquifer characteristics. EPA shall make the final selection of the method(s) after receiving the Settling Defendant's proposal.

b. The Work Settling Defendants shall install monitoring wells in the Waste Management Area to evaluate groundwater contamination levels directly under the Landfill and to monitor water table levels within and beneath these areas. Work Settling Defendants shall install and operate extraction wells in the Waste Management Area to supplement the perimeter groundwater/leachate collection/extraction system in lowering the water table beneath the Landfill Wastes unless the Work Settling Defendants can demonstrate to EPA's satisfaction that extraction from within the Landfill will not be necessary to lower the groundwater beneath the Landfill Waste.

c. The Work Settling Defendants shall design, construct and operate a treatment system, utilizing the PACT^{R} process as set forth in the ROD or an alternative, equally effective treatment process, to treat the collected groundwater/leachate to levels necessary for discharge to the Cocheco River or the City of Dover Publicly Owned Treatment Works (POTW).

If EPA determines based upon pre-design studies that the PACT^{R} System will not be as effective or efficient as an alternative system, then this alternative treatment system may be employed. Controls must be employed on the alternative treatment system to remove VOC's prior to their emission into ambient air.

d. The Work Settling Defendants shall design and operate the groundwater/leachate collection/extraction and treatment system so that effluent discharged from the system to the Cocheco River meets the substantive requirements of the National Pollutant Discharge Elimination System (NPDES) as well as other applicable or relevant and appropriate requirements as set out in the ROD at Appendix E. The Work Settling Defendants shall monitor the treatment system to ensure that the effluent meets all such requirements.

If the groundwater/leachate is discharged to the POTW, the Work Settling Defendants shall meet the procedural and substantive requirements of those ARARs concerning the discharge of the groundwater/leachate from the Site to the POTW.

e. The Work Settling Defendants shall construct a groundwater diversion system upgradient of the Landfill designed to minimize clean groundwater from contact with the Landfill Wastes, thus reducing the volume of contaminated groundwater requiring treatment. The clean groundwater flowing into the diversion system shall be diverted to either the wetlands or the Cocheco River without mixing with the collected groundwater/ leachate. The diverted clean groundwater discharged to the Cocheco River may be discharged with the treated groundwater/leachate.

f. The Work Settling Defendants shall design and construct the contaminated groundwater/leachate collection/extraction system, the upgradient diversion system and the extraction wells within the Waste Management Area in such a manner as to minimize redundant functions of each individual component. The objective of the system as a whole is to meet groundwater Final Cleanup Levels at the Point of Compliance and to minimize the amount of groundwater needing treatment. This shall be achieved by minimizing contact of clean groundwater with the Waste left in place through the use of a diversion system, and by lowering the groundwater level beneath the Waste, to the extent technically practicable.

g. The Work Settling Defendants shall meet federal and state discharge requirements for all discharges to surface waters, and shall also meet all applicable or relevant and appropriate requirements to such discharges as set out in the ROD at Appendix E. The Work Settling Defendants shall design, monitor, construct and maintain effluent treatment units in order to attain ARARs and meet Performance Standards.

h. To mitigate dewatering of the wetlands, the Work Settling Defendants shall, as necessary to prevent dewatering of the wetlands, discharge diverted clean groundwater to groundwater downgradient from the Site or to wetland areas where dewatering may have occurred as a result of groundwater extraction operations. Any discharge of treated groundwater to groundwater at the Site shall meet all applicable or relevant and appropriate requirements as identified in the ROD at Appendix E.

i. The Work Settling Defendants shall, as part of pre-design, evaluate the practicability of discharging the contaminated groundwater and leachate to the Publicly Owned Treatment Works (POTW) facility in Dover, New Hampshire. If the POTW is used to treat contaminated waters, Work Settling Defendants shall pre-treat contaminated groundwater/leachate prior to sending those waters to the POTW if necessary to meet local sewer pre-treatment standards and federal and state pre-treatment and discharge regulations.

3. Standards for Contaminated Groundwater Collection/Extraction and Treatment System

The Work Settling Defendants shall design, construct, operate and maintain the groundwater/leachate collection/extraction and treatment system in compliance with all applicable or relevant and appropriate requirements as identified in Appendix E to the ROD and all terms of the Consent Decree and this SOW.

Work Settling Defendants shall test sludge generated by the groundwater/leachate treatment system, and if determined to be a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) or other ARARs, such sludge shall be removed from the Site, transported and disposed of in accordance with the applicable or relevant and appropriate requirements set out in the ROD at Appendix E, including but not limited to the requirements of RCRA and State hazardous waste disposal requirements. If the Work Settling Defendants determine that the sludge is not a hazardous waste pursuant to RCRA, the sludge may be managed as a solid waste and disposed of according to State solid waste laws.

The Work Settling Defendants shall design, construct, operate, and maintain the groundwater/leachate collection/extraction and treatment system, which will be handling hazardous materials, in accordance with all applicable or relevant and appropriate requirements as identified in the ROD at Appendix E, including but not limited to the federal (RCRA) and state (Part ENV-WM 353 and 708) hazardous waste requirements relating to standards for generators, security, inspection and training, tank systems, use and management of containers, miscellaneous treatment units (activated carbon columns), and packaging, labelling, manifesting and transportation.

Any discharge of treated groundwater to surface water at or about the Site shall meet all applicable or relevant and appropriate requirements as identified in the ROD at Appendix E, including but not limited to the substantive requirements of the National Pollutant Discharge Elimination System, 40 C.F.R. Part 125, and New Hampshire Administrative Code Ch. Ws 430, Parts 437 and 439, the Federal Clean Water Act (CWA), 33 U.S.C. §§ 1251 et seq., and regulations promulgated thereunder.

The Work Settling Defendants shall develop and implement an Operation and Maintenance Program designed to ensure the long-term, continued effectiveness of the groundwater extraction and treatment system, as set forth in Section I of this SOW. The Work Settling Defendants shall perform the required activities in the Operation and Maintenance Plan.

When groundwater Interim Cleanup Levels have been met at the Point of Compliance and in the groundwater/leachate collected in the groundwater/leachate collection/extraction system for two consecutive quarterly groundwater sampling rounds, the Work Settling Defendants may request that EPA approve a plan to cease collection/extraction and treatment of the leachate/groundwater. The Work Settling Defendants' request must demonstrate that migration of contaminated groundwater from under the Landfill will not, in the absence of active collection/extraction and treatment, cause groundwater at the Point of Compliance to exceed Interim Cleanup Levels. Pending approval by EPA to cease

collection/extraction and treatment of groundwater/leachate, the Work Settling Defendants shall continue to operate and maintain the collection/extraction and treatment system as approved by EPA under this SOW and the Consent Decree.

When the Interim Cleanup Levels have been met at the Point of Compliance for three consecutive years after cessation of the collection/extraction and treatment system, Work Settling Defendants shall submit a Demonstration of Compliance Report summarizing the data which supports the conclusion that the Interim Cleanup Levels have been achieved. Upon EPA's acceptance of the conclusion in such a report and that Interim Cleanup Levels have been achieved in accordance with 40 CFR 264.100 (d) and (f), Work Settling Defendants shall collect, tabulate and submit all data to be specified by EPA, which will be necessary for EPA to conduct a risk assessment as called for in the ROD. The risk assessment of the residual groundwater contamination will assess the cumulative risks for carcinogens and non-carcinogens posed by Site groundwater at the Point of Compliance. The risk assessment will employ methods and assumptions consistent with Interim and Final EPA guidance, policies and regulations available at the time the risk assessment is conducted.

If EPA determines that the risks are within EPA's risk management standards as set out in the National Contingency Plan, the Interim Cleanup Levels will be Final Cleanup Levels and will become Performance Standards. If EPA determines that the risks are not within EPA's risk management standards, then EPA will establish New Cleanup Levels, and the Work Settling Defendants shall renew the operation of the groundwater/leachate collection/extraction and treatment systems until the New Cleanup Levels, specified by EPA, are achieved (as set out above), or the remedy is otherwise deemed protective by EPA. These New Cleanup Levels shall constitute the Final Cleanup Levels for the Site and shall be Performance Standards.

Work Settling Defendants shall maintain the groundwater/leachate collection/extraction and treatment equipment for the Site in operable condition until the Work Settling Defendants can demonstrate through the groundwater monitoring program that the Final Cleanup Levels have not been exceeded at the Point of Compliance for a period of three consecutive years after cessation of the groundwater/leachate collection/extraction and treatment in accordance with the procedures in 40 C.F.R. 264.100(d) and (f).

F. ADMINISTRATIVE REVIEW OF CERTAIN PERFORMANCE STANDARDS

Notwithstanding any other provision of this Statement of Work, if at any point during the performance of the Work, legislative or administrative amendments are made to the applicable or relevant and appropriate federal laws and regulations (ARARs) identified in the ROD at Appendix E, or EPA issues Interim or Final national policy or guidance concerning the applicability, relevance or appropriateness of those federal ARARs to Superfund sites, such that the Point of Compliance would be moved or the Interim Cleanup Levels (as set out in this SOW and in the ROD) would be changed if that amendment/policy/guidance were applied to this Site, the Work Settling Defendants may propose modifications to the remedy selected in the ROD and modifications of the requirements of this Statement of Work. Notwithstanding any other provision of this Statement of Work, if at any point prior to Work Settling Defendants' submission of the Pre-Final design (95% design), legislative or administrative amendments are made to the applicable or relevant and appropriate federal laws and regulations (ARARs) identified in the ROD at Appendix E, such that the composite cap design would be changed if those amendments were applied to this Site, the Work Settling Defendants may propose, prior to the submission of the Pre-Final design, modifications to the remedy selected in the ROD and modifications of the requirements of this Statement of Work. EPA shall review the Work Settling Defendants' proposed modifications and, after review and comment by the State, EPA shall issue a decision to the Work Settling Defendants. EPA's decision concerning such proposed adjustments to the Point of Compliance, changes in the Interim Cleanup Levels, or changes to the composite cap in this Statement of Work shall be subject to the dispute resolution provisions in Section XX of the Consent Decree; in particular judicial review of such a decision shall be in accordance with Paragraph 70 of the Decree. Nothing in this paragraph shall require EPA to take action which is contrary to the NCP or other law, nor shall this paragraph require EPA to apply retroactively those amendments/policies/guidances which expressly prohibit retroactive application. In addition, nothing in this paragraph shall be construed to relieve the Work Settling Defendants of their obligation to implement the Work on the schedules set out in this SOW and the plans submitted pursuant to this SOW; there shall be no delay in the Work required under the Decree and this SOW while Work Settling Defendants propose changes to the SOW, while they await EPA's decision with respect to such a proposal, or while they await the outcome of dispute resolution.

G. REMEDIAL DESIGN

The remedial design process shall consist of initial remedial activities, pre-design activities, and remedial design activities. The Work Settling Defendants shall prepare separate work plans for the pre-design activities and the remedial design activities and shall submit them to EPA for review and acceptance.

1. Initial Remedial Steps

a. Design Contractor

(1) Within thirty (30) days after notice of the lodging of the Consent Decree, the Work Settling Defendants shall notify EPA and the State, in writing, of the name, title, and qualifications of the Supervising Contractor to be used in carrying out the Remedial Design Activities to be performed pursuant to the Consent Decree. Work Settling Defendants shall notify the EPA and the State of the names of any other contractors and/or subcontractors proposed within 60 days from the lodging of the Consent Decree. Selection of any such contractor shall be subject to disapproval by EPA. If EPA disapproves of the selection of any contractor, the Work Settling Defendants shall submit a list of contractors, including their qualifications, to EPA and the State within 21 days of receipt of the disapproval of the contractor previously selected. Upon EPA response, the Work Settling Defendants may at their election select any one not disapproved on the list. After selection of a contractor, Work Settling Defendants shall notify EPA and the State of the name of the contractor within 14 days following receipt of EPA's response.

(2) Within thirty (30) days after Work Settling Defendants submit the list of the proposed contractors, pursuant to Section G.1.a.(1) above, the Work Settling Defendants shall select a contractor and submit to the EPA a Letter of Acceptance from the selected Remedial Design Contractor(s), copies of the signed contract(s), and final bid packages from the bidders for such contracts.

b. Health and Safety Plan

(1) Within seventy (70) days after the lodging of the Consent Decree, the Work Settling Defendants shall develop and submit to EPA for review and approval a site-specific Health and Safety Plan including a Contingency Plan in accordance with Attachment 1 of the SOW and in compliance with 40 CFR § 264 Subpart D and New Hampshire Admin. Code Part ENV-WM-708.02(i).

c. Site Security Plan

(1) Within sixty (60) days after the Work Settling Defendants submit the Letter of Acceptance, the Work Settling Defendants shall complete a study of existing site security measures (e.g. gate, fence, signs) and shall submit to EPA for review and approval by EPA a Site Security Plan. This plan shall detail the results of the study and shall specify appropriate measures to control unauthorized entry onto the Site, including construction of a security fence at the edge of the Landfill area along Tolend Road, and posting signs around the perimeter of the Site alerting the public to the presence of hazardous materials and the conduct of remedial action activities at the Site. The security plan shall be consistent with 40 C.F.R. § 264.14 and the parallel state regulations. The security plan shall specifically address the security measures to be taken during recontouring of the Landfill, the measures to be taken to prevent contact with the drainage swale, and the necessity of 24-hour security services. The Work Settling Defendants shall design the security plan to reflect and complement the level of work activity on Site at the various phases of the work.

d. Site Survey/Site Access/Site Map

(1) Within sixty (60) days after the Work Settling Defendants submit the Letter of Acceptance, the Work Settling Defendants shall submit to EPA a topographical or otherwise appropriate land survey which delineates property boundaries within and surrounding the Site to which access may be required to conduct the Work, identifies all current property owners of such land, identifies the edge of the Waste and the Waste Management Area, and identifies all utilities, rights of way, and easements on all lands to which access may be required at any time to conduct the Work. The exact location of the Point of Compliance shall be set by EPA at the edge of the Waste Management Area in accordance with the applicable or relevant and appropriate requirements as set out in the ROD, Appendix E; specifically, it shall be set in accordance with 40 C.F.R § 264.95 and the National Contingency Plan, 40 C.F.R. Part 300. Prior to submittal of the topographical survey drawing, Work Settling Defendants shall propose and EPA shall approve, the specific scale and, if a topographic map, the contour interval.

2. Pre-Design Steps

a. Within 75 days after the Work Settling Defendants receive approval of the Health and Safety Plan, the Work Settling Defendants shall submit to EPA for review and approval a Project Operations Plan, a Pre-Design Work Plan, and an Environmental Monitoring Plan, as set forth below.

(1) The Project Operations Plan shall include the following components, each of which is described in detail in Attachment 1 to this SOW:

(a) A Quality Assurance/Quality Control Plan;

(b) The Health and Safety Plan developed pursuant to Section G.1.b of this SOW, updated as appropriate;

(c) A Field Sampling and Analysis Plan; and

(d) A Project Management Plan.

(2) The Pre-Design Work Plan shall specify in detail the investigations necessary for the design of all remedial activities. The Pre-Design Work Plan shall include, for each such investigation, a statement of its purpose and objectives, an identification of the specific activities necessary to conduct the investigation, and a timetable/schedule for performance of those activities, including the deadline for submittal of the final study reports for each investigation. The specifics of these investigations are set forth below.

(a) Consolidation of Drainage Swale Sediments - The Work Settling Defendants shall, at a minimum:

(i) Perform appropriate sampling to define the extent of contaminated sediments in the drainage swale to be consolidated. This investigation shall estimate the depth of those sediments in the swale, confirm the location of those sediments, and confirm the amount of those sediments to be consolidated into the Landfill.

(ii) Develop a drainage swale wetlands restoration plan which requires that all wetlands from which sediments have been removed to be reestablished to attain the natural and beneficial values. In developing this plan, the Work Settling Defendants shall perform a detailed assessment of the pre-remediation condition of the wetland areas likely to be disturbed by the sediment excavation. The Work Settling Defendants shall also identify those factors that are essential to restoration of the natural and beneficial values, as required by ARARs. The Work Settling Defendants shall also include a plan for monitoring selected features of the restored wetland at periodic intervals, as described in Section G.2.a.(3) of this SOW.

(b) Capping of the Landfill - The Work Settling Defendants shall perform an initial assessment of both the composite cap design and the margin area cap design in accordance with SOW Section D. This study shall include the availability and costs of materials proposed for each layer of the caps, the design assumptions and bases for layer thickness and materials chosen, the expected cost and time requirements for operation and maintenance of the caps and expected lifetime of the caps, expected difficulties during construction, expected failure and infiltration rates and a comparison to other cap designs. The assessment shall also include, at a minimum:

(i) A limited investigation to define the horizontal and vertical extent of the Waste in the Waste Management Area for the purpose of determining the area to be covered by the caps.

(ii) An investigation to determine the volume of materials to be moved in the recontouring of the Landfill and from where those materials will be moved, should the Work Settling Defendants elect to undertake recontouring. This investigation shall estimate the volume of sediments, soils and debris to be consolidated into the Landfill. Investigations such as borings and test pit excavations shall be conducted to determine areas of the Landfill that are suitable for recontouring. The Work Settling Defendants shall propose as part of the Pre-Design Workplan, for EPA approval, a soil sampling and analysis program and the model(s) to be used to evaluate soil contaminant fate and transport. The Work Settling Defendants shall also submit a proposal for establishing cleanup levels in the soils in accordance with EPA guidance. During these investigations, and at all other times during remedial activities, appropriate measures shall be taken by the Work Settling Defendants to prevent air emissions, dust and leachate from adversely affecting nearby receptors.

(iii) An investigation into stability, settlement, and subsidence problems associated with placing a composite cap on the Landfill. The Work Settling Defendants shall conduct geotechnical testing prior to construction to assess slope stability and potential settlement of the Landfill. Such testing shall include, but not necessarily be limited to, a topographic survey, soil borings, construction and settlement monitoring of the test

fill. The settling and subsidence analysis will be used to accommodate possible settling and subsidence of the Landfill in the cap design.

(iv) An investigation into the appropriate Landfill configuration. The Work Settling Defendants shall grade or "contour" the slopes in accordance with RCRA closure guidelines, NH standards and good engineering design practices. The side slopes of the Landfill's final cover shall be no steeper than 3 (horizontal) : 1 (vertical). The Work Settling Defendants shall flatten slopes steeper than 3 : 1 by filling in those areas with compacted clean fill or stabilized by appropriate methods. To adequately perform the slope stability analyses, the Work Settling Defendants shall assess the strength properties of the cover system components, the Waste, and the foundation soils, along with seepage conditions. In selecting the FML for the final cover, the Work Settling Defendants shall address the specific geomembrane's coefficient of friction for preventing slippage of cover components and its ability to undergo deflection due to differential settlement. The Work Settling Defendants shall consider benches with ditches as part of a cover design to control drainage and limit slope lengths to meet slope stability and erosion requirements.

(v) An investigation using the Hydrologic Evaluation of Landfill Performance (HELP) model to calculate percolation in each layer of the Landfill for various cap designs. The Work Settling Defendants shall verify the coefficient of run off, default data, climatologic data and soil data used by the HELP model. The Work Settling Defendants shall submit to EPA for approval the input parameters used in the HELP model as appropriate to this Site, and shall calculate surface runoff, evapotranspiration, changes in water storage, lateral drainage,and percolation through each layer.

(c) Groundwater/Leachate Collection/Extraction System - The Work Settling Defendants shall perform a hydrogeological assessment of the groundwater/leachate collection/extraction system to develop data to determine the final location, number and size of extraction wells and/or trenches in compliance with SOW Section E. This assessment shall evaluate extraction rates and determine influent flow at the treatment

plant; it shall also evaluate extraction techniques, such as cyclic pumping, to enhance system performance. The assessment shall be sufficient to support the design of an effective groundwater/leachate collection and extraction system that meets the objectives of the ROD, the Consent Decree, and Section E of this Statement of Work. At a minimum, the Work Settling Defendants shall conduct a hydrogeological assessment which shall include:

(i) a systematic review and incorporation of all existing hydrogeologic work conducted at the Site;

(ii) a well inventory and inspection, with an evaluation of well suitability and integrity for future sampling;

(iii) evaluation of geologic cross-sections to identify data gaps and inaccuracies;

(iv) an overburden water table map based on a recent round of water levels and re-survey, as well as an investigation to determine the groundwater elevation in the Landfill and the directions of flow;

(v) an investigation to determine the vertical extent of contamination at the perimeter of the Landfill, which may include the evaluation of existing data;

(vi) identification of design criteria for vertical and horizontal placement of the leachate collection and groundwater extraction system;

(vii) a plan for conducting one or more pump tests in several locations at the Landfill's perimeter;

(viii) identification of leachate collection system design elements and current data gaps; and

(ix) a plan of proposed Site activities to address data gaps, if warranted to complete Remedial Design.

(d) Groundwater/Leachate Treatment System - If on-site treatment is warranted based upon discharge requirements, the Work Settling Defendants shall assess the groundwater/leachate treatment system by conducting a treatability study for the unit processes to be

employed in the groundwater treatment system. The Work Settling Defendants shall conduct the treatability study in order to optimize design and operating conditions necessary for performance, and shall perform the treatability study consistent with the "Guide for Conducting Treatability Studies under CERCLA," Interim Final, EPA 549/2-89/058, December 1989 and OSWER Directive 9380.3-02FS and any updates to these documents. At a minimum, the Work Settling Defendants shall design the treatability study to satisfy the following criteria, and the Work Settling Defendants shall submit a plan to conduct bench and/or on-site pilot sized treatability studies in order to achieve these criteria:

(i) to determine the effectiveness of treatment in terms of contaminant removal;

(ii) to determine design criteria, to properly size the equipment and to determine residual management needs; and

(iii) to determine the nature and extent of expected Operation and Maintenance.

(e) The Work Settling Defendants shall evaluate whether discharging contaminated groundwater and leachate to the Dover POTW is practicable. At minimum the POTW discharge investigation shall:

(i) evaluate the long term capacity of the Dover POTW to accept and treat the contaminated groundwater and leachate;

(ii) evaluate the need for pre-treatment of the contaminated groundwater and leachate prior to discharge to the POTW to meet the Dover POTW pretreatment requirements; and

(iii) evaluate construction issues related to the extension of the existing sewer line to the Landfill.

(f) Background Arsenic Determination - The Work Settling Defendants shall propose, for EPA's review and approval, a study to statistically determine the background concentrations of arsenic in the groundwater in the general area of the Landfill. The background arsenic study for groundwater shall conform to the regulations set out in 40 C.F.R. § 264.97. The study shall be based upon data from a new sampling round(s)

of groundwater using wells and locations and sampling procedures proposed by the Work Settling Defendants and approved by EPA. Groundwater samples shall be analyzed for unfiltered arsenic according to approved CLP methods. The Work Settling Defendants' proposal for the arsenic study, shall, at a minimum, include the following:

1) the statistical approach to be utilized;

2) the number of samples required;

3) the proposed locations of the wells, where samples are to be collected; and

4) the analytical methods to be employed for sample analysis.

The Work Settling Defendants, upon EPA's approval of the study proposal, shall conduct the arsenic study as part of the Pre-Design Studies.

At the conclusion of the arsenic study, the Work Settling Defendants shall submit to EPA a Technical Memorandum identifying the number of samples taken, location of the samples, analytical results, and the statistical tests employed including, but not limited to, all assumptions, calculations and conclusions employed in or derived from the statistical analysis of the data.

(3) The Environmental Monitoring Plan shall include monitoring programs relating to the groundwater, surface water, air and wetlands remediation, as set forth below.

(a) The Work Settling Defendants shall develop a groundwater monitoring program for the following purposes: to monitor contaminant concentrations at and beyond the Point of Compliance over time; to evaluate the hydraulic effectiveness of the remedial activities and attainment of the groundwater Cleanup Levels; to determine whether Cleanup Levels are sustained once they are achieved; and to monitor whether groundwater contaminant levels in treated effluent meet Performance Standards. The groundwater monitoring program shall include, but not necessarily be limited to, the following components:

(i) Performance monitoring - The Work Settling Defendants shall implement a program consistent with 40 C.F.R. § 264.100(d) and N.H. Admin. Code Part ENV-WM-708.02(j), which require implementation of a monitoring program to assess the effectiveness of the remedial activities. To ensure compliance with discharge requirements, the Work Settling Defendants shall, no less often than monthly, sample treatment plant effluent that is discharged to groundwater for VOCs using EPA Method 524.2 or updated versions of this method. To ensure compliance with substantive NPDES requirements, the Work Settling Defendants shall, no less often than monthly, sample treatment plant effluent that is discharged to surface water for VOCs using EPA Method 524.2, for semi-volatiles using EPA Method SW-846 8270, with data validation performed according to EPA-Region 1 data validation functional guidelines for evaluating organic analysis, and for metals using the EPA Contract Laboratory Program (CLP Methods) or another methods described in 40 CFR 136. Work Settling Defendants may propose, for EPA's approval, or EPA may require, equivalent alternative testing methods. EPA may required Work Settling Defendants to add or delete specific analysis parameters, depending on sampling results and observed trends.

(ii) Groundwater monitoring - The Work Settling Defendants shall sample those monitoring wells proposed by the Work Settling Defendants and approved by EPA on a quarterly basis beginning within thirty (30) days from 50 percent construction completion. The Work Settling Defendants shall continue such quarterly sampling for at least the first two years of full-scale operation of the groundwater/leachate collection/extraction and treatment system. Subsequently, the Work Settling Defendants shall sample the wells at an appropriate sampling frequency, but no less often than annually, as determined by EPA after review of each set of results. The Work Settling Defendants shall analyze VOC samples using EPA Method 524.2, semi-volatile compounds using EPA Method SW-846 8270, with data validation performed according to EPA-Region 1 data validation functional guidelines for evaluating organic analysis or where EPA determines, CLP Methods, and metals using CLP Methods or another method described in 40 CFR 141 or their updated versions. Work Settling

Defendants may propose, for EPA's approval, or EPA may require, equivalent alternative testing methods. EPA may require Work Settling Defendants to add or delete specific analysis parameters, depending on sampling results and observed trends. The Work Settling Defendants shall measure water levels quarterly throughout the monitoring program.

(iii) Eastern and Southern Plumes Groundwater Monitoring - The Work Settling Defendants shall sample those monitoring wells proposed by the Work Settling Defendants and approved by EPA on a semi-annual basis beginning within thirty (30) days of EPA approval of the Pre-Design Work Plan. The Work Settling Defendants shall continue such semi-annual sampling until the construction of the cap and the groundwater/leachate collection/extraction and treatment systems have achieved 75 percent construction completion. The Work Settling Defendants shall sample those monitoring wells proposed by the Work Settling Defendants and approved by EPA on a quarterly basis beginning within thirty (30) days of achieving 75 percent construction completion. The Work Settling Defendants shall continue such quarterly sampling for at least five years from commencing the quarterly sampling. Subsequently, the Work Settling Defendants shall sample the selected wells at an appropriate sampling frequency, but no less often than annually, as determined by EPA after review of each set of results. The Work Settling Defendants shall analyze VOC samples using EPA Method 524.2, semi-volatile compounds using EPA Method SW-846 8270, with data validation performed according to EPA-Region 1 data validation functional guidelines for evaluating organic analysis and CLP Methods, metals using CLP Methods or another method described in 40 CFR 141 or their updated versions. Work Settling Defendants may propose, for EPA's approval, or EPA may require, equivalent alternative testing methods. EPA may require Work Settling Defendants to add or delete specific analysis parameters, depending on sampling results and observed trends. The Work Settling Defendants shall measure water levels quarterly throughout the monitoring program.

(b) The Work Settling Defendants shall develop an air monitoring program which shall include, but not limited to, the following components:

(i) Pre-Design Sampling and Assessment - The Work Settling Defendants shall conduct field and office studies to evaluate the rate and quality of gaseous emissions from the Landfill to determine if passive gas collection and venting to the atmosphere are sufficient for the protection of human health and the environment. Chemical analysis performed in conjunction with these studies shall include, at a minimum, those compounds listed on Table 1-2 of the February 28, 1991 Feasibility Study. The Work Settling Defendants shall conduct sample collection and analyses according to EPA approved methods.

(ii) Ambient sampling - The Work Settling Defendants shall install and maintain permanent air quality sampling stations at EPA approved locations to confirm that air quality during performance of the Work does not exceed ambient air quality standards or limits, meets all applicable or relevant and appropriate requirements as set out in Appendix E of the ROD, and are protective of human health and the environment. Continuous ambient air monitoring shall be conducted throughout recontouring in order to confirm established air quality standards and limits are not exceeded. Any exceedance of standards or limits at monitoring stations established in the Field Sampling and Analysis Plan shall result in immediate cessation of recontouring activities until EPA approves a corrective action plan.

(iii) Performance monitoring - The Work Settling Defendants shall propose for EPA approval, and implement a gas migration monitoring program, including, but not limited to, the installation of soil gas monitoring wells to determine the effectiveness of the passive gas collection system as it operates, so that operational adjustments can be made as needed. The Field Sampling and Analysis Plan shall describe at a minimum, the proposed locations of gas monitoring wells and gas migration monitoring points.

The Work Settling Defendants shall sample emissions quarterly at the outlets of the gas vents and gas migration monitoring points and submit the data on a quarterly basis to EPA and the State. The Work Settling Defendants may propose, for EPA approval, a sampling interval, other than quarterly, based upon the evaluation of gas migration data trends. The Field Sampling and Analysis Plan shall describe at a minimum, the parameters, sampling methods, sampling locations, and analytical techniques.

(c) The Work Settling Defendants shall develop a wetlands monitoring program which shall include, but not necessarily be limited to, the following components:

(i) Pre-Remediation Assessment - The Work Settling Defendants shall make an inventory of the indigenous flora and fauna in conjunction with the study set forth in Section G.2.a(2)(a). The Work Settling Defendants shall conduct sampling to determine areas of sediment deposition, along the drainage swale down to the Cocheco River, including the area just beyond where the swale and the river converge, where contaminant concentrations exceed the Cleanup Level described in Section C.

(ii) Performance monitoring - The Work Settling Defendants shall monitor surface drainage from the Site during excavation, recontouring and cap construction. The Work Settling Defendants shall monitor potential impacts on the wetlands surrounding the Landfill as a result of excavation, recontouring and cap construction activities (i.e. soil erosion of cap materials into the wetlands). Prior to wetlands restoration of the drainage swale, the Work Settling Defendants shall sample the remaining soils to confirm that those soils do not exceed Cleanup Levels, as set out in Section C.

(iii) Ambient monitoring - The Work Settling Defendants shall monitor the wetlands restoration at one year intervals to verify that restoration has been maintained in accordance with the approved wetlands restoration plan. The Work Settling Defendants shall evaluate the effectiveness of the restoration of the natural and beneficial values of the wetlands and maintain the wetlands in a restored state for a minimum of

five years or until approved by the EPA as complete.

The Setting Defendants shall monitor the wetlands adjacent to the Site for adverse changes to the wetlands during the operation of the groundwater/leachate collection/extraction and treatment system and report annually on the condition of the wetlands and any adverse affects of the treatment plant to EPA.

The Work Settling Defendants shall conduct activities to limit the impact on wetlands and to the extent practicable, utilize existing roadways and former logging paths to minimize the amount of clearing required for the installation of additional monitoring wells.

(d) The Work Settling Defendants shall review and evaluate all monitoring data on a regular basis during the implementation of the remedial action to ensure that the monitoring data accurately reflects the environmental conditions at the Site and to ensure that the response objectives are achieved.

b. Within seven (7) days after the Work Settling Defendants receive approval of the Project Operations Plan, the Pre-Design Work Plan, and the Environmental Monitoring Plan from EPA, the Work Settling Defendants shall initiate Work set forth in the Pre-Design Work Plan, the Environmental Monitoring Plan and Project Operations Plan in accordance with the terms of those plans and the schedules contained therein. The Work Settling Defendants shall complete all such work set forth in accordance with the schedules contained in those plans.

c. Within two hundred fifty (250) days after Work Settling Defendants receive approval of the Project Operations Plan, the Pre-Design Work Plan and the Environmental Monitoring Plan, the Work Settling Defendants shall submit for review and approval by EPA a Pre-Design Report for each investigation performed in accordance with the Pre-Design Work Plan and this SOW. Those reports shall include sediments consolidation, Landfill recontouring and capping, Landfill gas ventilation system, groundwater/leachate extraction, groundwater/leachate treatment, and treated groundwater discharge. The Pre-Design Reports shall set forth in detail the results of the work performed and shall identify the Performance Standards for each component of the remedy.

3. Remedial Design Work Plan

a. Within 60 days after Work Settling Defendants receive approval of the Pre-Design Report the Work Settling Defendants shall submit for review and approval by EPA an updated Health and Safety Plan and a Remedial Design Work Plan which shall set forth all tasks to be undertaken in connection with the design of the Remedial Action, and shall include a proposed schedule for completion of the design process. The Remedial Design Work Plan shall include, at a minimum, the schedule and tasks for the following activities:

(1) Development of detailed design plans, specifications (including schedules of implementation) and a Construction Quality Assurance Project Plan (CQAPP) in accordance with Attachment 4 of this SOW for the consolidation of sediments, recontouring of the Landfill, capping of the Landfill, and implementation of groundwater/leachate remediation;

(2) Submission of design plans for each component of the Work for review and approval by EPA at four stages during development of those plans, as indicated in items (a) through (d) below:

(a) Preliminary design addressing approximately 30% of the total design. The deliverables for this 30% submission will be specified in the Remedial Design Work Plan and will include, without limitation, the following items:

(i) design criteria;

(ii) results of additional field sampling;

(iii) project delivery strategy;

(iv) preliminary plans, drawings and sketches;

(v) required specifications in outline form; and

(vi) preliminary construction schedule.

(b) Intermediate design addressing approximately 60% of the total design. The deliverables for this 60% design submission will be specified in the Remedial Design Work Plan;

(c) Pre-final design addressing 95% of the total design which shall include, at a minimum:

(i) corrected design prints and calculations with written comments to define corrections and/or additions to the 60% design plans;

(ii) plans, specifications and calculations equivalent to 95% of the overall design;

(iii) initial draft Operation and Maintenance Plan consistent with Section G.3.a.(5&6), below;

(iv) preliminary bid documents; and

(v) a summary of the experience and qualifications of the invited bidders.

(d) a final design addressing 100% of the total design for each portion of the Work which shall include:

(i) final plans and specifications in reproducible format;

(ii) final bid documents;

(iii) an Operation and Maintenance Plan consistent with Section G.3.a.(5&6), below.

(3) Submission of the assumptions, drawings and specifications necessary to support the conclusion that the design will meet all performance standards identified in the Pre-Design Reports; this submission shall be made with the submission of the pre-final design report.

(4) Submission of a final Environmental Monitoring Plan which updates and refines the Pre-Design Environmental Monitoring Plan described in Section G.2.a.(3); this submission shall be made with the submission of the final design reports.

(5) Submission of a Draft Final Operation and Maintenance Plan that shall ensure the long-term, continued effectiveness of the groundwater/leachate collection/extraction and treatment system. The Operation and Maintenance Plan will be finalized when the construction of the treatment system is 90 percent complete. The Draft Final Operation and Maintenance Plan shall include:

(a) Description of normal operation and maintenance;

(b) Description of potential operating problems;

(c) Description of routine process monitoring and analysis;

(d) Description of contingency operation and management;

(e) Operational safety plan;

(f) Description of equipment;

(g) Annual operation and maintenance budget;

(h) Record keeping and reporting requirements;

(i) A cost estimate for post-closure care; and

(j) Establishment of a financial assurance mechanism for long-term operation and maintenance and post-closure care.

(6) Development of a Draft Operation and Maintenance Plan that shall ensure the long-term, continued effectiveness of the Landfill cap and gas collection system (GCS). The Operation and Maintenance Plan will be finalized when construction of the cap and GCS are 90 percent complete. The Draft Operation and Maintenance Plan shall include:

(a) Description of normal operation and maintenance;

(b) Description of potential operating problems;

(c) Description of routine process monitoring and analysis;

(d) Description of contingency operation and maintenance plan;

(e) Operational safety plan;

(f) Description of equipment to be available on site;

(g) Annual operation and maintenance budget;

(h) Record keeping and reporting requirements;

(i) A cost estimate for long-term operation and maintenance; and

(j) Establishment of a financial assurance mechanism for long-term operation and maintenance.

b. Within seven (7) days after the Work Settling Defendants receive approval from EPA of the updated Health and Safety Plan and the Remedial Design Work Plan, the Work Settling Defendants shall initiate the activities set forth therein in accordance with the Plan, including all specified schedules, and shall submit for review and approval by EPA each of the items described in the Remedial Design Work Plan. The Work Settling Defendants shall complete all such work set forth in accordance with the schedules contained in those plans.

H. REMEDIAL ACTION

1. Remedial Action Contractor

a. Within thirty (30) days after Work Settling Defendants receive EPA approval of the final (100 %) design, the Work Settling Defendants shall submit the names, titles and qualifications of the Supervising Contractor and the names contractors and/or subcontractors from whom the Work Settling Defendants intend to solicit bids to perform the remedial action tasks set forth in this SOW. EPA may disapprove any or all of the proposed bidders. The failure of EPA to disapprove any bidder shall not preclude EPA from disapproving the selected contractor.

b. Within sixty (60) days after Work Settling Defendants submit their list of bidders, the Work Settling Defendants shall notify EPA of the name of the selected contractor and shall submit to EPA a Letter of Acceptance from the contractor, copies of the signed contract(s), and final bid packages from the bidders for such contracts.

2. Remedial Action Work Plan

a. Within ninety (90) days after approval of the final design submittal, the Work Settling Defendants shall submit for review and approval by EPA a Remedial Action Work Plan for implementing the Site remedial actions and associated activities, including implementing the Operation and Maintenance Plans for each component of the Work consistent with the approved design, the Consent Decree, and this Statement of Work. The Work Settling Defendants shall submit new or updated Sample and Analysis Plan, Health and Safety Plan, Site Management Plan and a Quality Assurance/ Quality Control Project Plan for review and approval by EPA, as necessary and appropriate to implement each component of the Work.

The Remedial Action Work Plan shall contain:

(1) A description of activities necessary to implement the remedial actions consistent with the Consent Decree, this SOW, the ROD, and the approved Remedial Design, as well as activities necessary to meet all Performance Standards, including but not limited to the following:

(a) methods for satisfying permitting requirements;

(b) contractor mobilization/site preparation;

(c) excavation/dredging of sediments in the drainage swale and if necessary due to capping operations, in the drainage ditch;

(d) restoration of the natural and beneficial value of the disturbed wetland areas;

(e) dewatering of the excavated/dredged sediments;

(f) exploratory investigations such as borings and test pits into the Landfill margins;

(g) analysis of the vertical extent of contamination at the perimeter of the Landfill, which may include the evaluation of existing data;

(h) hydraulic analysis of the groundwater system within the Landfill prior to and after extraction system startup;

(i) construction of the composite cap with a gas collection and ventilation system;

(j) construction and start-up of groundwater/leachate extraction and treatment facilities;

(k) construction of the groundwater diversion trench;

(l) performance monitoring of groundwater and demobilization of treatment facilities;

(m) performance monitoring of air and wetlands;

(n) operation and maintenance for each component of the Work; and

(o) long-term environmental monitoring.

(2) A schedule for the completion of all these activities, which shall also identify milestone events in the remedial action process. The milestone schedule shall be consistent with Section K of this SOW and with schedules approved by EPA pursuant to this SOW and the Consent Decree.

b. Within fifteen (15) days after the Work Settling Defendants receive notice that EPA has approved the Remedial Action Work Plan, the Work Settling Defendants shall initiate remedial activities in accordance with the Remedial Action Work Plan and schedules contained therein.

c. After initiation of the remedial activities and throughout the construction period, the Work Settling Defendants and the Work Settling Defendants' contractor(s) shall meet weekly with EPA regarding progress and details of implementation of the Work, unless EPA determines that any such meeting is unnecessary.

d. Within thirty (30) days of completion of construction of the Work the Work Settling Defendants shall submit a Final Remedial Construction Report for the Work for approval by EPA. The Final Remedial Construction Report shall include the following documentation, at a minimum:

(1) a summary of procedures actually used (in chronological order) to excavate the contaminated soils and sediments, to recontour the existing landfill, to construct the composite cap, collect the contaminated groundwater/leachate, treat the contaminated groundwater/leachate, handle all residues from the groundwater/leachate treatment unit, and monitor the air quality during all on-site activities;

(2) tabulation of all analytical data and field notes prepared during the course of the Remedial Design and Remedial Action activities including, but not limited to, horizontal and vertical perimeter locations to confirm the extent of the Landfill Waste, soil and sediment data confirming Cleanup Levels have been met for the drainage swale excavation activities, groundwater monitoring results confirming the effectiveness of the groundwater/leachate collection/extraction system in minimizing the migration of contaminants beyond the Point of Compliance, pre- and post-treatment groundwater results confirming the effectiveness of the treatment process, air monitoring data and types of monitoring devices used to confirm that air quality standards were maintained during all on-site treatment processes, Eastern Plume groundwater monitoring and natural attenuation modeling results, Southern Plume groundwater monitoring results and any other analytical data collected during treatment. Results and notes shall be available to and produced for EPA and State Environmental Agency review upon request. These documents shall include, but not be limited to;

(a) QA/QC documentation of these results;

(b) presentation of these results in appropriate figures;

(c) a description, with appropriate photographs, maps and tables of the Site,

(d) final, detailed cost breakdowns for each of the treatment process components;

(e) conclusions regarding conformance of treatment processes with the Performance Standard;

(f) descriptions of actions taken and a schedule of anticipated future actions to be taken to complete the Work.

3. Final Construction Inspection

Within 15 days after Work Settling Defendants conclude that the construction has been fully (100% complete) performed, the Work Settling Defendants shall schedule and conduct a FINAL CONSTRUCTION INSPECTION. This inspection shall include participants from all parties involved in the Remedial Action, including but not limited to the Work Settling Defendants and their contractors, EPA and the State.

4. Certification of Completion of Construction

The Remedial Construction shall be considered complete when the following has been achieved:

a) EPA and the State have conducted the Final Construction Inspection;

b) The Final Remedial Construction Report has been approved by EPA;

c) The remedy is operational and functional;

d) All punch list items have been completed to EPA's satisfaction; and

e) EPA approves of the Final Operation and Maintenance Plan.

EPA shall review the Final Remedial Construction Report, following the Final Construction Inspection. If EPA, after reasonable opportunity for review and comment by the State, determines that the Performance Standards for construction and design specifications (including approved changes in design specifications) have been achieved, and the requirements set out above have all been met to EPA's satisfaction, then EPA will issue the Work Settling Defendants a Certification of Completion of Construction.

I. LONG-TERM OPERATION AND MAINTENANCE

Immediately after receipt of notice that EPA has approved the Work Settling Defendants' Final Remedial Construction Report for the Work, the Work Settling Defendants shall review and update the corresponding monitoring plans developed in accordance with Section G.2.a(3) of this SOW and finalize the long-term Operation and Maintenance (O&M) Plan for each component of the Work developed in accordance with Section G.3.a.(5) and (6) of this SOW. The Work Settling Defendants shall submit the finalized O&M plans for EPA approval within 30 days after notice of EPA approval of the Final Remedial Construction Report. All O&M

plans shall meet those standards set out in the applicable or relevant and appropriate requirements identified in Appendix E of the ROD. The Operation and Maintenance Plans shall include the following:

1. Landfill Cap Operation and Maintenance Plan

Work Settling Defendants shall update the Operation and Maintenance Plan to ensure the long-term, continued effectiveness of the composite cap. The Work Settling Defendants shall perform all required activities in the Operation and Maintenance Program for as long as required by ARARs.

2. Groundwater/Leachate Collection/Extraction and Treatment Systems Operation and Maintenance Plan

Work Settling Defendants shall update the Operation and Maintenance Plan, including groundwater, surface water, sediment and air monitoring plans, to ensure the long-term, continued effectiveness of the groundwater/leachate collection/extraction and treatment systems. The Work Settling Defendants shall perform all required activities in the Operation and Maintenance Plan until groundwater Performance Standards and Final Cleanup Levels are attained as set forth in Section E of this SOW and the ROD. Once these standards and levels are attained, the Work Settling Defendants shall implement a long term monitoring program for the Site in accordance with RCRA and the New Hampshire Hazardous Waste and Solid Waste regulations.

3. Landfill Gas Ventilation Systems Operation and Maintenance Plan

Work Settling Defendants shall update an Operation and Maintenance Plan, including the air monitoring plan, to ensure the long-term, continued effectiveness of the gas ventilation systems. The Work Settling Defendants shall perform all activities required in the Operation and Maintenance Plan until such time as the Work Settling Defendants demonstrate to EPA's satisfaction that: gases collected and vented are at levels protective of human health and meet ARARs; volumes of gases generated in the Landfill are not and in the future will not have a detrimental effect on the integrity of the cap; and that gases are not migrating beyond the Waste Management Area above levels protective of human health and in excess of ARARs. Risk assessments will employ methods and assumptions consistent with Interim and Final EPA guidance, policies and regulations available at the time the risk assessment is conducted.

I. INSTITUTIONAL CONTROLS

In accordance with Section X of the Consent Decree, the Work Settling Defendants shall propose and, after approval by EPA, implement Institutional Controls designed to achieve the following purposes:

1. Restrict the Use of Contaminated Groundwater

Work Settling Defendants shall take all measures necessary, including the implementation of Institutional Controls, to prevent anyone but the Parties from extracting and/or using groundwater from the upper aquifer at the Site, from drilling any wells at the Site, or from taking any actions which may disturb the marine clay unit between the upper and lower aquifers, until such time as the Final Cleanup Levels are achieved.

2. Limit Exposure to Waste Material

Work Settling Defendants shall take all measures necessary, including the implementation of Institutional Controls, to prevent or limit exposure to the Waste Material at the Site during and after remedial activities. Such measures shall include inhibiting unauthorized access to the Site, patrolling the Site, and preventing any unauthorized activities, such as digging or dumping at the Site.

Since Waste is to be left in place at this site, Work Settling Defendants shall implement such irrevocable Institutional Controls as easements, covenants running with the land and other deed restrictions preventing for as long as allowable under law any activities which may disturb the environmental monitoring wells and equipment or the composite cap over the Waste Management Area. Such deed restrictions shall be binding on all heirs, successors and assigns of the Work Settling Defendants that own, occupy, or control property within the Waste Management Area, and shall benefit and be enforceable by EPA and the State. Zoning By-Laws or other such revocable controls shall not be sufficient for this purpose.

3. Prevent Disturbance to the Performance of the Work

Work Settling Defendants shall take all measures necessary, including the implementation of Institutional Controls, to prevent the disturbance to or delay of the performance of the Work on any portion of the Site. Such measures shall include, but not be limited to, taking measures for protecting the equipment and structures on the Site and for obtaining access for the conduct of remedial activities on and about the Site.

4. Ensure Effectiveness and Integrity of the Work

Work Settling Defendants shall take all measures necessary, including the implementation of Institutional Controls, to ensure the long-term effectiveness and integrity of the Work performed pursuant to this SOW and the Consent Decree. As noted above, Work Settling Defendants shall implement irrevocable Institutional Controls to ensure the effectiveness and integrity of the composite cap for as long as allowable under law. Work Settling Defendants shall also take such measures as are necessary for protecting Site structures and the environmental monitoring wells and equipment.

The extent to which Institutional Controls are employed should reflect the level of remedial activities at the Site and the risks posed by those activities. EPA may require of the Work Settling Defendants the implementation of additional Institutional Controls as such controls become necessary.

Institutional controls shall include, but not be limited to, deed restrictions such as easements and covenants running with the land, enforceable zoning restrictions, physical barriers such as fences and gates, notices such as posted signs in areas where the public may approach the Site, and education and outreach such as public forums, advertisements and brochures.

These Institutional Controls shall not in any way impede or prohibit the Parties to the Consent Decree from carrying out their obligations under this SOW and the Consent Decree, nor shall they impede or prevent the EPA or the State from carrying out its statutory and administrative functions.

J. SCHEDULE SUMMARY

Below is a summary of tasks or deliverables and due dates which are described above. In the event of inconsistency between this Section and any textual description set forth elsewhere in the SOW, the textual description shall control.

Task/Deliverable	Due Date
Remedial Design Supervising Contractor (Section G.1.a.(1))	30 days after lodging of the Consent Decree
Remedial Design contractors and/or subcontractors list (Section G.1.a.(1))	60 days after lodging of the Consent Decree

Task/Deliverable	Due Date
Letter of Acceptance from Remedial Design Contractor(s) (Section G.1.a.(2))	30 days after submission to EPA of RD Contractor List
Health and Safety Plan (Section G.1.b.)	70 days after lodging of the Consent Decree
Site Security Plan (Section G.1.c.)	60 days after submission to EPA of Letter of Acceptance
Site Map (Section G.1.d.)	60 days after submission to EPA of letter of Acceptance
Pre Design Activities 1. Project Operation Plan (Section G.2.a.(1)) 2. Pre-Design Work Plan (Section G.2.a.(2)) 3. Environmental Monitoring Plan (Section G.2.a.(3))	75 days after EPA approval of the Health & Safety Plan
Pre-Design Work Plan Implementation (Section G.2.b)	7 days after EPA approval of Pre-Design Work Plan
Pre-Design Report (Section G.2.c)	250 days after EPA approval of Pre-Design Work Plan.
Remedial Design Work Plan (Section G.3.a) Design Report	60 days after EPA approval of Pre-
Remedial Design Work Plan Implementation (Section G.3.b.)	7 days after EPA approval of Remedial Design Work Plan
Remedial Action Contractor List (Section H.1.a.)	30 days after EPA approval of final (100%) design plans

Task/Deliverable	Due Date
Submission of Letter of Acceptance from Remedial Action Contractor (Section H.1.b.)	60 days after submission to EPA of Remedial Action Contractor List
Remedial Action Work Plan (Section H.2.a.)	90 days after submittal to EPA of the Letter of Acceptance
Remedial Action Implementation (Section H.2.b.)	15 days after EPA approval of Remedial Action Work Plan
Final Remedial Construction Report (Section H.2.d.)	30 days after completion of construction of Remedial Action
Operation and Maintenance Plans (Section I)	30 days after EPA approval of Final Remedial Construction Report
Demonstration of Compliance Report (Section E.3)	60 days after Interim Cleanup Levels have been achieved for three consecutive years

ATTACHMENT 1
PROJECT OPERATIONS PLAN

The purpose of this attachment is to outline the specific requirements of four aspects of the Project Operations Plan: the Health and Safety Plan, the Quality Assurance and Quality Control Plans, the Field Sampling and Analysis Plans and the Project Management Plan. All such plans shall be submitted to EPA for approval in accordance with section F of the SOW.

A. SITE SPECIFIC HEALTH AND SAFETY PLAN

The Work Settling Defendants shall develop a Site-specific Health and Safety Plan (HSP) to address potential hazards caused by Site activities to individuals carrying out or monitoring field activities and to the surrounding community. This plan shall be consistent with the applicable guidelines of EPA's Health and Safety Planning for Remedial Investigations under CERCLA (EPA/540/G-85/002, June 1985) and the requirements of the Occupational Safety and Health Administration (OSHA) Guidelines for Hazardous Waste Operations and Emergency Response Activities (interim final rule, 29 CFR Part 1910 as amended, Federal Register Vol. 51, No. 244, December 19, 1986) and any updates to these documents.

The HSP shall be adequate to assure the safety of the field team and the surrounding community during all activities conducted pursuant to the Consent Decree, including sampling, construction and operation of the Work. The HSP shall contain contingency plans which address those situations which may adversely affect the surrounding community.

The Work Settling Defendants shall develop a Health and Safety Plan which addresses, at a minimum, the following items:

1. personal protective equipment requirements;
2. on-site monitoring equipment requirements;
3. safe working procedures specifications;
4. equipment decontamination procedures;
5. personnel decontamination procedures; and
6. special and emergency procedures, including contingency plans consistent with 40 CFR § 264 Subpart D and ENV-WM 708.02(i).

B. PROJECT ACTIVITIES QUALITY ASSURANCE/QUALITY CONTROL PLAN

The Work Settling Defendants shall prepare Quality Assurance/Quality Control (QA/QC) Plan to specify the procedures to be used to insure that the technical specifications of the materials and equipment are met and to specify the procedures to be used in all sampling and analyses to insure that representative, accurate, reliable data is obtained. The QA/QC Plan shall be developed for the sampling and analysis events described in the Field Sampling and Analysis Plan submitted with the Pre-Design Report. The Work Settling Defendants shall prepare this QA/QC plan in accordance with EPA guidance document QAMS-005/80 and Data Quality Objectives guidance documents EPA/540/G-87/003 and 004 (March 1987) and any updates to these documents. At a minimum the following topics shall be addressed in the QA/QC Plan:

1. title page with provisions for signatures of principal investigators;

2. table of contents;

3. project description;

4. project organization and responsibility;

5. quality assurance objectives for measurement data, stated in terms of precision, accuracy, completeness, representativeness, correctness and comparability;

6. sampling procedures;

7. sample chain of custody;

8. field and analytical equipment, calibration procedures, references and frequency;

9. EPA approved analytical procedures;

10. data reduction, validation and reporting;

11. internal quality control checks and frequency;

12. quality assurance performance audits, system audits and frequency of implementation and non-conformance reports;

13. preventive maintenance procedures and schedules;

14. specific routine procedures to be used to assess the precision, accuracy and completeness of data and to assess specific measurement parameters involved;

B. PROJECT ACTIVITIES QUALITY ASSURANCE/QUALITY CONTROL PLAN

The Work Settling Defendants shall prepare Quality Assurance/Quality Control (QA/QC) Plan to specify the procedures to be used to insure that the technical specifications of the materials and equipment are met and to specify the procedures to be used in all sampling and analyses to insure that representative, accurate, reliable data is obtained. The QA/QC Plan shall be developed for the sampling and analysis events described in the Field Sampling and Analysis Plan submitted with the Pre-Design Report. The Work Settling Defendants shall prepare this QA/QC plan in accordance with EPA guidance document QAMS-005/80 and Data Quality Objectives guidance documents EPA/540/G-87/003 and 004 (March 1987) and any updates to these documents. At a minimum the following topics shall be addressed in the QA/QC Plan:

1. title page with provisions for signatures of principal investigators;

2. table of contents;

3. project description;

4. project organization and responsibility;

5. quality assurance objectives for measurement data, stated in terms of precision, accuracy, completeness, representativeness, correctness and comparability;

6. sampling procedures;

7. sample chain of custody;

8. field and analytical equipment, calibration procedures, references and frequency;

9. EPA approved analytical procedures;

10. data reduction, validation and reporting;

11. internal quality control checks and frequency;

12. quality assurance performance audits, system audits and frequency of implementation and non-conformance reports;

13. preventive maintenance procedures and schedules;

14. specific routine procedures to be used to assess the precision, accuracy and completeness of data and to assess specific measurement parameters involved;

15. corrective action; and

16. quality assurance reports.

C. FIELD SAMPLING AND ANALYSIS PLAN

The Work Settling Defendants shall develop a Field Sampling and Analysis Plan which indicates the procedures to be followed for all samples to be taken pursuant to the Consent Decree and this SOW. The Field Sampling and Analysis Plan shall, at a minimum, address the following elements for all sampling of water, soil, sediments, and air pursuant to the Consent Decree and this SOW:

1. data quality objectives of the sampling effort, with particular emphasis on determining whether Performance Standards have been met;

2. type, location, rationale and construction specifications for placement of any proposed monitoring wells, well screens and borings;

3. type, quantity, frequency, and location of samples to be collected;

4. sampling methods to be used including any bio-assessment techniques, any well sampling and evaluation procedures, provisions for split sampling, split spoon sampling, composite sampling, soil and soil gas sampling, sampling preservation techniques, equipment needs and equipment cleaning and decontamination procedures, and field support requirements;

5. sample shipping and chain-of-custody procedures;

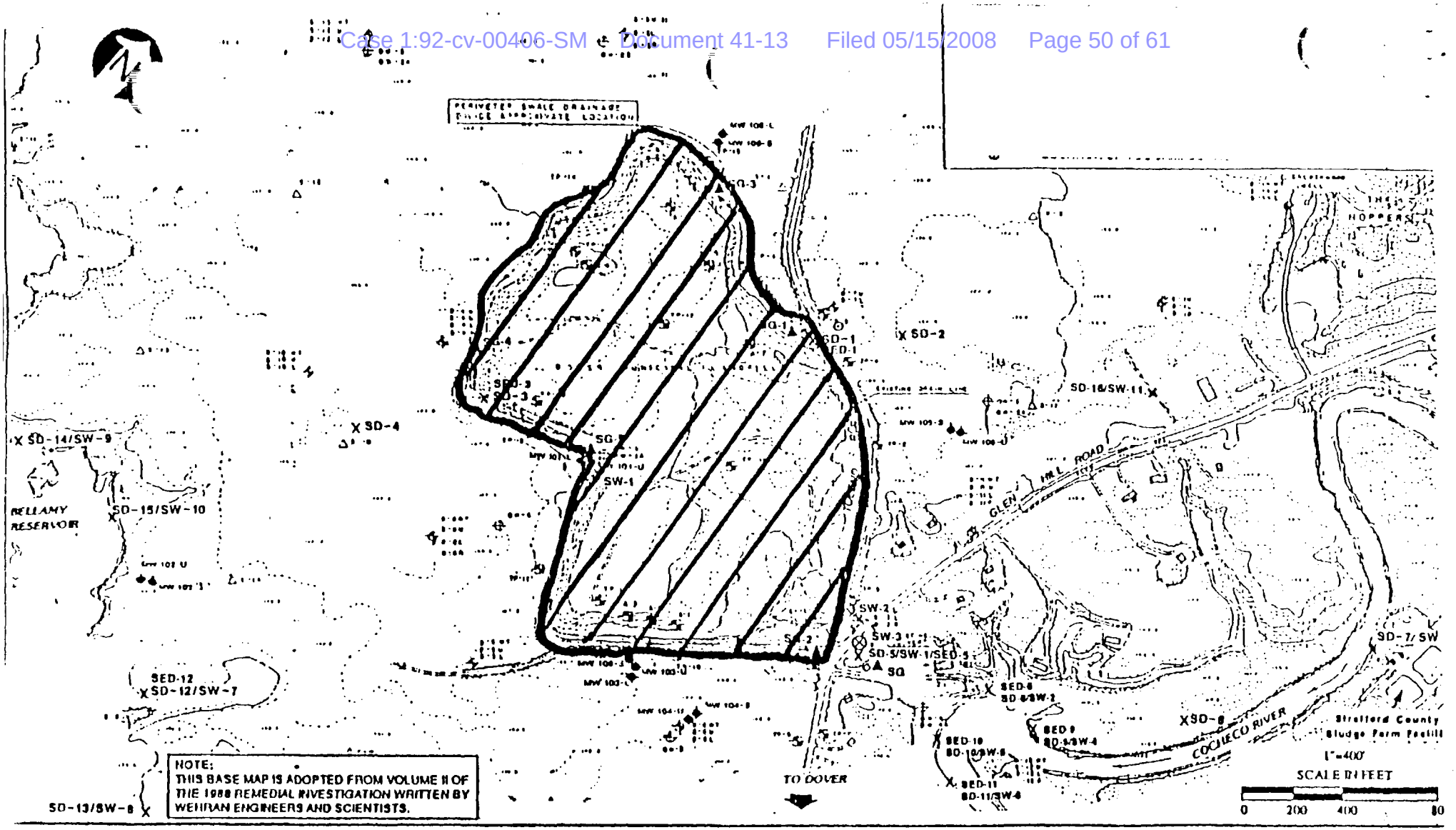
6. type of analysis to be run on each sample including reference to appropriate EPA approved/specified analytical methods; and

7. a discussion of chemical constituents of interest and historical ranges at the Site of concentrations based on available data.

D. PROJECT MANAGEMENT PLAN

A Project Management Plan to provide the project organizational structure, the responsibilities of project personnel and the field operations schedule.

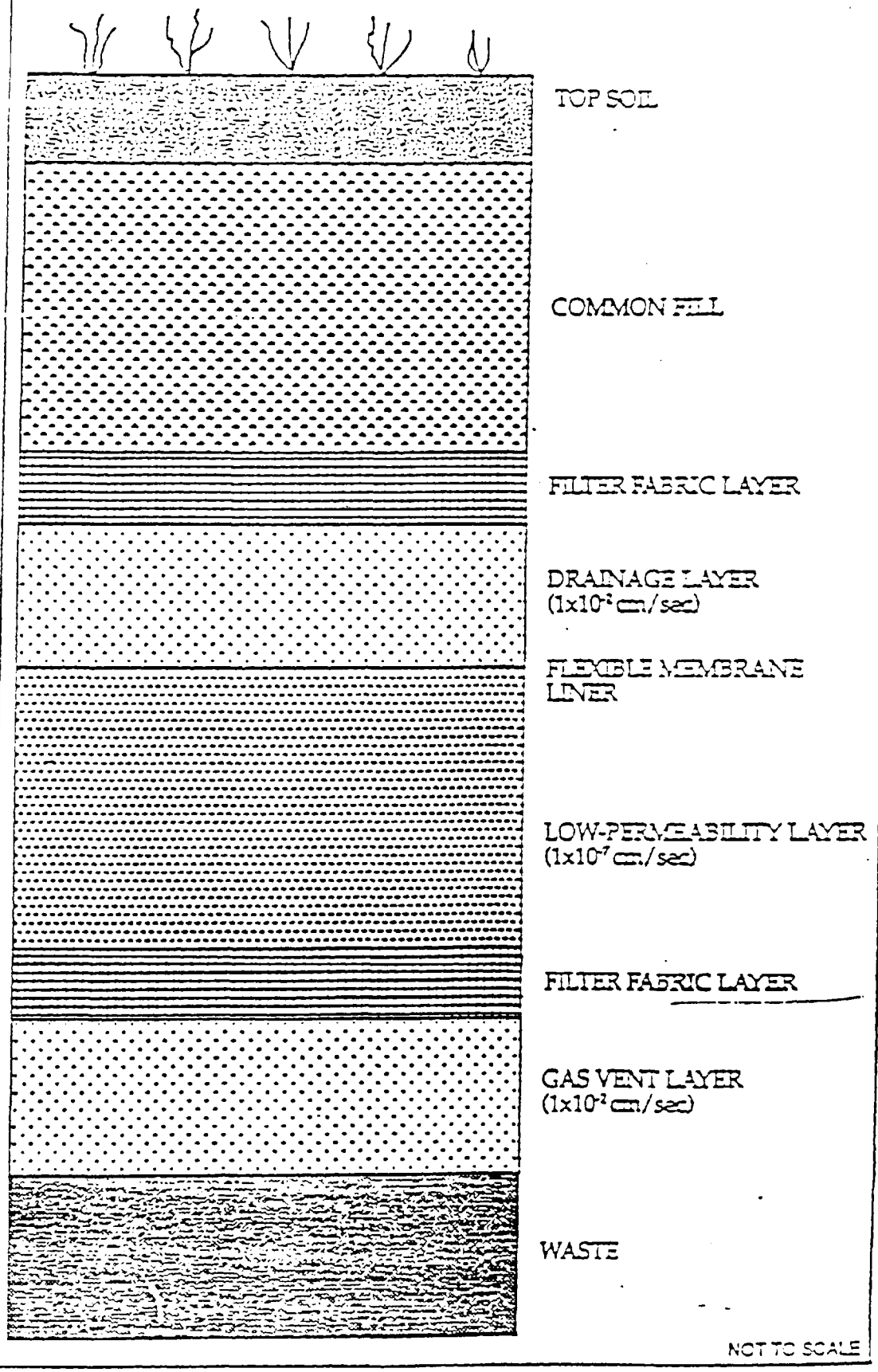
ATTACHMENT 2
DOVER MUNICIPAL LANDFILL WASTE MANAGEMENT AREA AND GROUNDWATER EXTRACTION SYSTEM CAPTURE ZONE



DOVER MUNICIPAL LANDFILL WASTE MANAGEMENT AREA AND GROUNDWATER EXTRACTION SYSTEM CAPTURE ZONE

ATTACHMENT 3
DOVER MUNICIPAL LANDFILL SUBGRADE CAP PREPARATION

DOVER MUNICIPAL LANDFILL SUBGRADE CAP PREPARATION



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ATTACHMENT 4
CONSTRUCTION QUALITY ASSURANCE/QUALITY CONTROL PLANS

The Work Settling Defendants shall prepare a Construction Quality Assurance Project Plan (CQAPP) to specify the procedures to be used during construction activities to insure that the technical specifications of the materials and equipment are met. The CQAPP shall specify the procedures to be utilized to insure that the Performance Standards and technical specifications for each component of the remedy are met and shall be developed in accordance with OSWER Report No. EPA/530-SW-86-031, Construction Quality Assurance for Hazardous Waste Land Disposal Facilities, and any future relevant guidance documents. The Work Settling Defendants shall prepare the CQAPP in accordance with EPA guidance document QAMS-005/80 and any updates to this document. At a minimum the following topics shall be addressed in the CQAPP:

1. title page with provisions for signatures of principal investigators;
2. table of contents;
3. project description;
4. project organization and responsibility;
5. field equipment including maintenance and decontamination;
6. internal quality control checks and frequency;
7. preventive maintenance procedures and schedules;
8. corrective action; and
9. quality assurance reports.

APPENDIX C:

MAP OF THE SITE

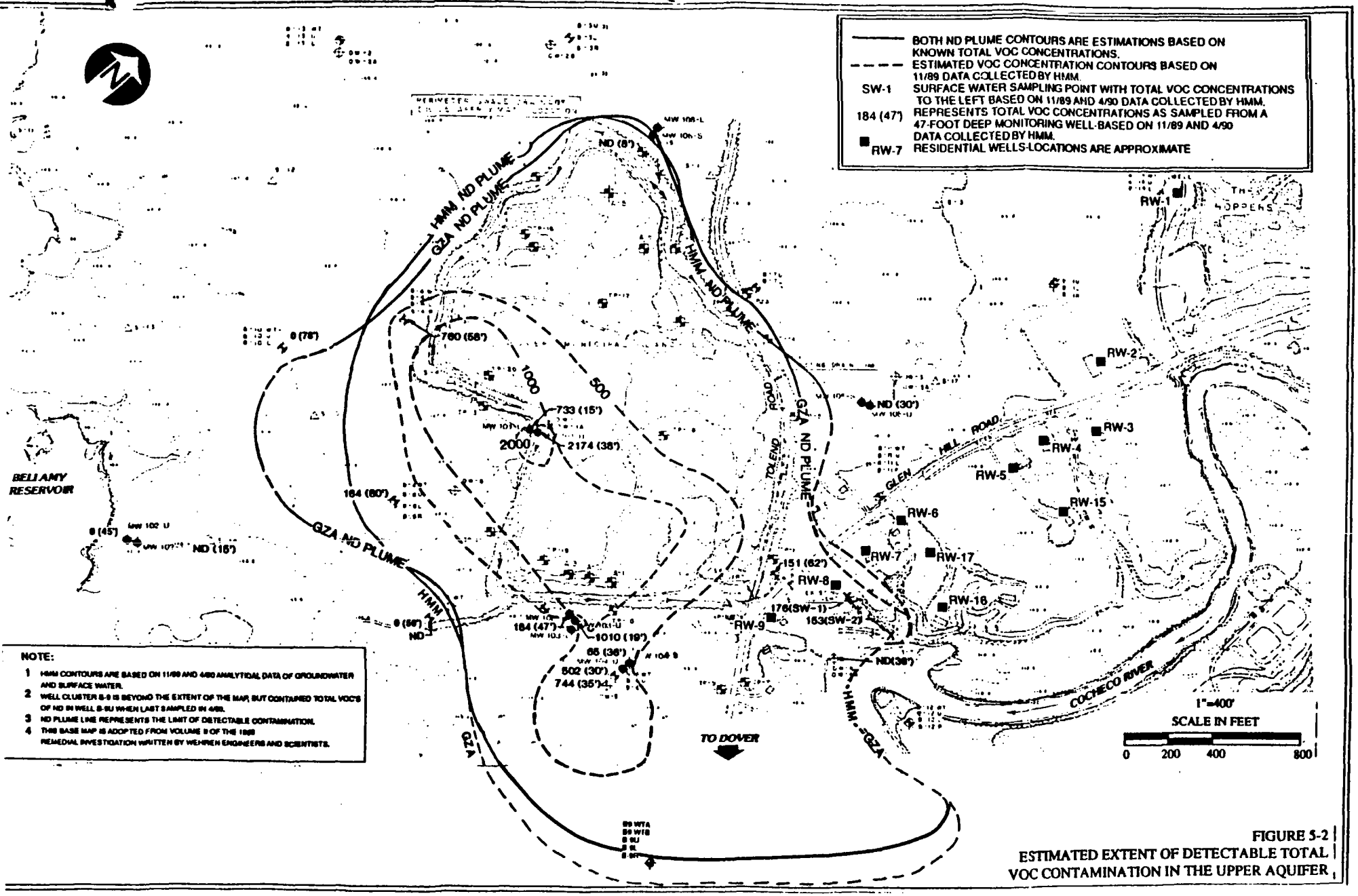
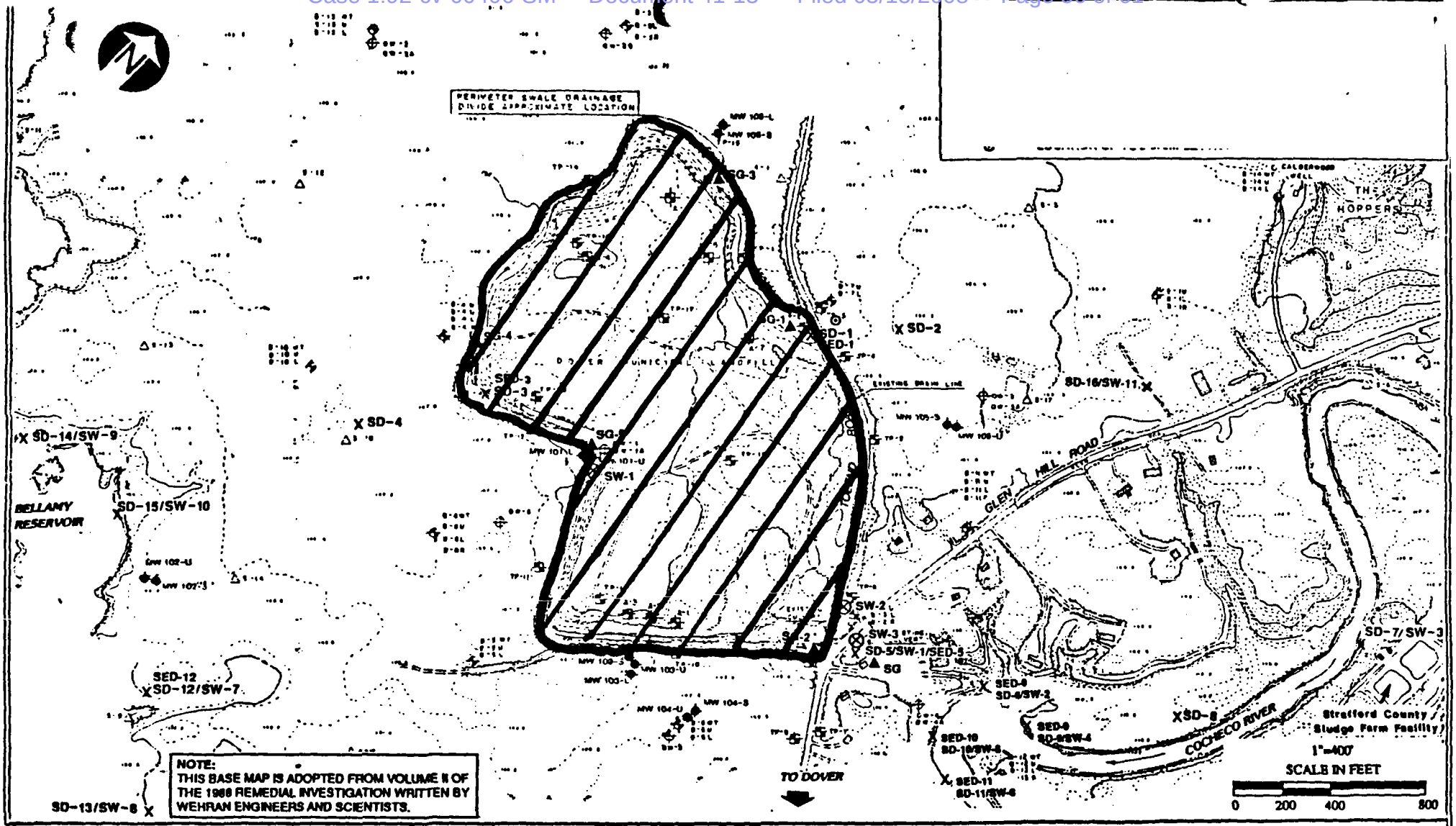


FIGURE 5-2
ESTIMATED EXTENT OF DETECTABLE TOTAL VOC CONTAMINATION IN THE UPPER AQUIFER

DOVER MUNICIPAL LANDFILL SITE

APPENDIX C



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DOVER MUNICIPAL LANDFILL

APPENDIX C

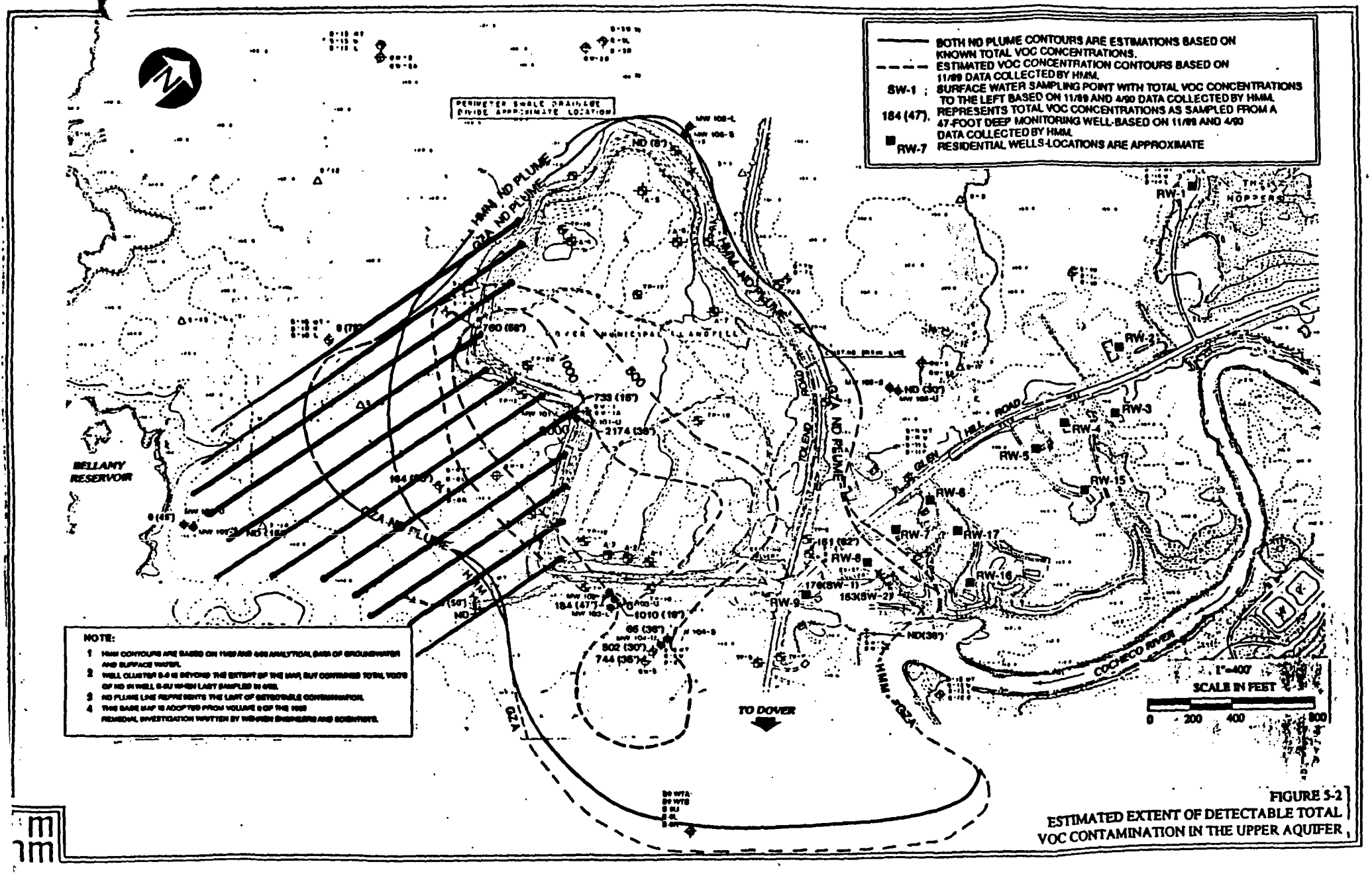

FIGURE 5-2
ESTIMATED EXTENT OF DETECTABLE TOTAL VOC CONTAMINATION IN THE UPPER AQUIFER

SOUTHERN PLUME AREA

APPENDIX C

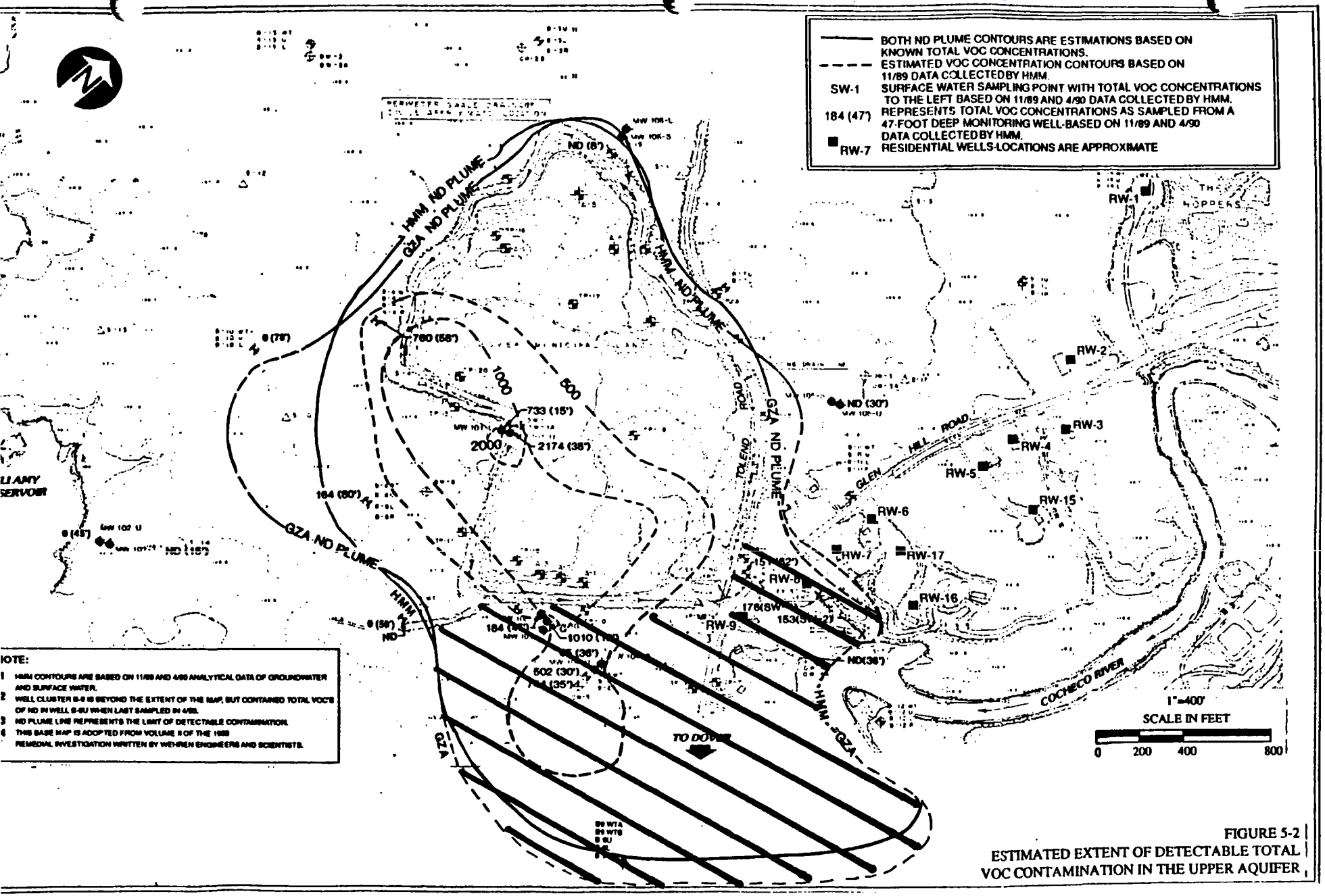

FIGURE 5-2
ESTIMATED EXTENT OF DETECTABLE TOTAL VOC CONTAMINATION IN THE UPPER AQUIFER

EASTERN PLUME AREA

APPENDIX C

APPENDIX D:

LIST OF NON-OWNER WORK SETTLING DEFENDANTS

Browning-Ferris Industries of New Hampshire, Inc.
Clarostat Manufacturing Company, Inc.
Davidson Interior Trim/Textron
Eastern Air Devices, Inc.
Town of Madbury
Melville Corporation/Miller Shoe
Moore Business Forms, Inc.
Leonard Rosen
United Tanners, Inc.
Wentworth-Douglas Hospital

APPENDIX E:

LIST OF OWNER WORK SETTLING DEFENDANTS

City of Dover

APPENDIX F:

LIST OF CASH-OUT SETTLING DEFENDANTS

Bayhead Products Corporation
Cleary Cleaners
Electric Motor Servicenter, Inc.
Franklin ElectroPlating Company, Inc.
General Electric
George J. Foster Company, Inc.
GFS Manufacturing Company
New England Telephone
Northeast Container Corporation
Portland Glass
Public Service of New Hampshire
United Parcel Service
Varney's Cleaners and Launder Center
Waste Management of Maine, Inc.
Waste Management of New Hampshire, Inc.